CLAIMS

What is claimed is:

1) A meshed (porous) steel pipe/tube used as concrete reinforcement comprising: a longitudinal meshed (porous) steel pipe or tube which has many holes on its wall, a mass of concrete is poured into the meshed (porous) steel pipe or tube and through the holes on its wall filled into the place between the meshed (porous) pipe or tube and formwork, so the composite meshed (porous) steel pipe or tube/concrete member can be made.
2) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the diameter of the steel pipe or tube can be various to meet the concrete member need.
3) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the ratio of the cross-sectional area of the steel pipe or tube to concrete can be various from 1% ~ 8%.
4) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, some more longitudinal/transverse reinforcement can be put into the meshed (porous) steel pipe or tube before the concrete being poured, to meet the designed cross-sectional area of the steel in concrete.
5) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the thickness of the steel pipe or tube can be various to meet the concrete member need.

6) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the size of the holes on its wall can be various, but can not smaller than 1.5 times of the maximum size of coarse aggregate in concrete, so that the concrete shall easily flow through it and fit into the place between steel pipe or tube and formwork.

7) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the shape of the holes on its wall can be round or other shapes.

8) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein the quantity of the holes on its wall can be various, suggested the ratio of total area of the holes to the area of pipe surface is 1% ~ 40%. The holes need to be well distributed on the steel pipe surface, and the distance between 2 holes can not too big, so that the concrete may easily flow into the place between the steel pipe or tube and formwork without void.

9) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, wherein some more smaller holes on its wall can be made between the holes on the steel pipe or tube in case to avoid debonding between concrete and steel pipe or tube.

10) A meshed (porous) steel pipe/tube used as concrete reinforcement as claimed in claim1, it can be used as load bearing member during construction period.

REFERENCES

A.H.Nilson, "Design of Concrete Structures," 12th edition, ISBN 0-07-046587-8, pp.265.